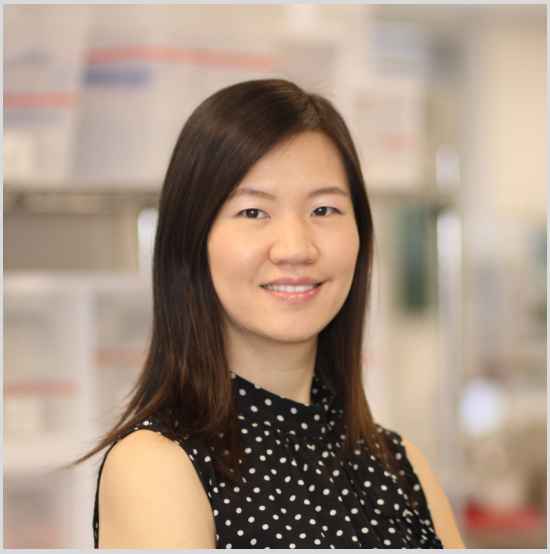
Biomedical Engineering
Wallace H. Coulter Foundation Lecture Series

Radically Simplifying Scale-up and Clinical Translation of hMSCs and Extracellular Vesicles



Xuan Xu
Field Application Scientist,
Rooster Bio Inc, Frederick, MD

Lecture: Friday, November 15, 2019
9:00AM-10:00AM
Room EC 2300
10555 West Flagler Street
Miami, FL 33174

FIU Engineering & Computing
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Biography

Dr. Xuan Xu is a Field Application Scientist (FAS) at RoosterBio Inc. Her role as a FAS is mainly to provide technical support to the commercial team, as well as manage customer product/technical inquires, including performing laboratory demonstrations at customer sites. Besides this, she also travel actively to conferences or customer centers to give talks or training sessions. Her educational background includes a Ph.D. in Molecular Medicine from the University of Texas Health Science Center at San Antonio (UTHSCSA), and a B.A. in Life Sciences from Fudan University in Shanghai, China. Dr. Xu conducted postdoctoral research at NCI/NIH prior to joining RoosterBio. Her Ph.D. focus was to investigate the function and regulation of the multiprotein Mediator of transcription in human disease including Alzheimer's disease (AD), X-linked mental retardation, colorectal cancer, etc. and included the identification of a Mediator subunit Med12, as a potential therapeutic target in AD. Her post-doctoral study involved the study of TGFb signaling in early embryonic development using an embryonic stem cell/epiblast stem cell system and in tumorigenesis using a cancer cell system. Her research work has been published in top journals (Mol. Cell, PNAS, EMBO Rep, PLoS Biol, etc.) including three featured articles which in sum have been cited nearly 600 times thus far.

Abstract

Over 1000 global clinical trials have been initiated with hMSCs since 2011, with a record number 164 trials initiated in 2018 alone. The MSC paradigm is expanding to include gene modified cells, MSC-sourced exosomes or extracellular vesicles, and engineered tissues, organs and medical devices where MSCs are a raw material input during product manufacturing. RoosterBio, a regenerative medicine technology platform company, blasts open the most significant bottleneck in clinical trial initiation by radically simplifying the use of MSCs. RoosterBio's high-volume, well-characterized adult hMSCs paired with highly engineered bioprocess media systems are built for rapid manufacturing scale-up, thus removing several years and millions of dollars from product development and clinical testing. This approach revolutionizes how regenerative medicine products are developed, clinically-translated, and commercialized.

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